

April 9, 2001

Mr. Timothy Molter
Aristoline Cabinets, Inc.
5217 Industrial Road
Fort Wayne, Indiana 46825

Re: Exempt Operation Status, 003-13655-00248

Dear Mr. Molter:

The application from Aristoline Cabinets, Inc. received on December 20, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following cabinet manufacturing facility located at 5217 Industrial Road, Fort Wayne, Indiana is classified as exempt from air pollution permit requirements:

- (a) One (1) Spray Room equipped with a pneumatic gun, using a maximum of one (1) gallon coatings/solvents per day.
- (b) One (1) Plastic Laminate Room equipped with a pneumatic gun, using a maximum of one (1) gallon coatings/solvents per day, and
- (c) Three (3) natural gas fired Gas Forced Air Heating Units with a total capacity of 0.7 MMBtu/hr.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (2) Pursuant to 326 IAC 6-3-2 (Process Operations) the particulate matter (PM) from the coating and laminating rooms shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

This exemption supersedes the previous registration issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/RB

cc: File - Allen County
Allen County Health Department
Air Compliance Section Inspector - Jennifer Dorn
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Exempted Source

Source Background and Description

Source Name: Aristoline Cabinets, Inc.
Source Location: 5219 Industrial Road, Fort Wayne, Indiana 46825
County: Allen
SIC Code:
Operation Permit No.: 003-13655-00248
Permit Reviewer: ERG/RB

The Office of Air Quality (OAQ) has reviewed an application from Aristoline Cabinets, Inc. relating to the construction and operation of a cabinet manufacturing facility.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) spray room equipped with a pneumatic gun, using less than one (1) gallon coatings/solvents per day.
- (b) One (1) plastic laminate room equipped with a pneumatic gun, using less than one (1) gallons coatings/solvents per day, and
- (c) Three (3) natural gas fired gas forced air heating units with a total capacity of 0.7 MMBtu/hr.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

There are no new construction activities included in this review.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) registration 003-5691-00248 issued on June 13, 1996

Note, due to use of more regulating compliant surface coatings, emissions are now at exemption level, therefore this exemption supersedes the previous registration.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
Spray Room		8.0	3.0	500	Ambient
Laminating Room		8.0	2.0	425	Ambient

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 20, 2000, with additional information received on February 13, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 4). Note emissions declined due to increased use of low VOC surface coating material.

Potential To Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	0.03
PM-10	0.03
SO ₂	0.00
VOC	3.56
CO	0.26
NO _x	0.00

Note: No individual HAP has the potential to be emitted at a rate greater than 10 tons per year. The most significant HAP emission is from n-butyl acetate which is emitted at a rate of 0.19 tons per year. Total HAP emissions are less than 25 tons per year - for Artistole total HAP emissions are 2.66 tons per year.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.1.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.
- (d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.1.

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Allen County has been classified as attainment or unclassifiable for all other criteria pollutant. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.03
PM10	0.03
SO ₂	0.00
VOC	3.56
CO	0.26
NO _x	0.00

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on data provided in the facility's application.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, total emissions identified in this approval 003-13655-00248, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) 326 IAC 20-14-1 (40 CFR 63 Subpart JJ - Wood Furniture Manufacturing Operation) applies to facilities engaged in wood furniture or wood furniture components and is a major source as defined in 40 CFR part 63, Subpart A. Aristoline is not a major source, therefore this rule does not apply.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Allen County and the potential to emit all criteria pollutant is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of cabinet manufacturing facility will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the coating and laminating rooms shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

326 IAC 8-2-12 (Wood Furniture and Cabinet coating)

This rule applies to facilities constructed after July 1990 and having actual emissions of VOC greater than 15 pound per day. Aristoline Cabinets was constructed in 1996, but actual VOC emissions are 6.25 pounds per day, therefore this rule does not apply.

Conclusion

The operation of this cabinet manufacturing facility shall be subject to the conditions of the attached proposed Exemption 003-13655-00248; note, this exemption supersedes the previous registration.

Appendix A: Emissions Calculations - Summary

Company Name: Aristoline
Address City IN Zip: 5219 Industrial Road, Fort Wayne, Indiana 46825
CP: 003-13655
Plt ID: 003-00248
Reviewer: ERG/RB
Date: Febraury 13, 2001

Uncontrolled Potential Emissions (tons/yr)

Process	PM*	PM10*	SO2	NOx	VOC	CO
Combustion	0.02	0.02	0.00	0.00	0.02	0.26
Surface Coating	0.01	0.01			3.54	
Total	0.03	0.03	0.00	0.00	3.56	0.26

Uncontrolled Potential Emissions (lbs/hr)

Process	PM*	PM10*	SO2	NOx	VOC	CO
Combustion	0.01	0.01	0.00	0.00	0.00	0.06
Surface Coating	0.00	0.00	0.00	0.00	0.81	0.00
Total	0.01	0.01	0.00	0.00	0.81	0.06

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

Company Name: Aristoline
Address City IN Zip: 5219 Industrial Road, Fort Wayne, Indiana 46825
CP: 003-13655
Plt ID: 003-00248
Reviewer: ERG/RB
Date: Febraury 13, 2001

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

0.7

6.1

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	0.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.023	0.023	0.002	0.000	0.017	0.258

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: Aristoline

Address City IN Zip: 5219 Industrial Road, Fort Wayne, Indiana 46825

CP: 003-13655

Pit ID: 003-00248

Reviewer: ERG/RB

Date: Febraury 13, 2001

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	6.439E-06	3.679E-06	2.300E-04	5.519E-03	1.042E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.533E-06	3.373E-06	4.292E-06	1.165E-06	6.439E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

